25X1

FY-67 Quarterly Report No. 1

PAR 243A
31 Aug 66

SUBJECT: Briefing Print Enlarger (Prototype)

TASK/PROBLEM

1. Design, fabricate and test a prototype briefing print enlarger (BPE) based upon tests and observations of the breadboard equipment developed on the combined PAR 202/224.

DISCUSSION

2. Authorization to proceed on changes to this PAR (PAR 243A) was given in customer message 7390, dated 6 June 66.

3. Mechanical design studies and the production of drawings for parts fabrication (detail drawings) have continued during this quarter.

4. Approximately 97% of the detail drawings have been made for the following:

a. Negative transport.

b. Print stock platen, carriage, and drive including the focus table drum.

5. All the detail drawing have been made for the following:

a. Objective lens interchange mechanism.

b. Objective lens focus mechanism and revised focus indicator.

6. Approximately 95% of the detail drawings have been made for the lamphouse and condenser lens assemblies.

7. Work has been started on assembly drawings. This effort is about 15% complete.

8. Approximately 90% of the individual parts have been released for purchasing or manufacturing.

9. A breadboard model to test the planned arrangement of the easel photometer was completed and tests of the sensitivity and uniformity of response with direction were made on the breadboard enlarger. The lowest response level was observed with the red filter in the enlarger lamphouse. There are 2.5 to 3.5 decades of working range available with the red filter.

Declass Review by NGA.

10. Tests of drying techniques (immersion fluid on the film) and of fume venting systems were made. It appears that both tasks can be accomplished with a single blower to exhaust air and fumes from the bottom of an enclosure around the gate area with the requirement that about 25 seconds be allowed for withdrawal of the negative upward from the gate. The gate enclosure is being designed to have radiant heating elements along the upper edges to warm the fluid slightly, as the film is withdrawn, to speed the evaporation.

11. "Decitrak" analog-to-digital converter (ADC) equipment is incorporated in the design to display the in-frame coordinates of the negative.

PLANNED ACTIVITY

12. Complete release of all parts drawings for purchase or manufacture by 30 Sep 66.

13. During the quarter, all detail drawings and a major part of the assembly drawing effort will be completed. The manpower assigned to drafting will be reduced to about one man by the end of the coming quarter.

14. Subassembly work may be started by the end of the quarter.